H3N2v Influenza Guidance for Healthcare and Public Health Providers
Michigan Department of Community Health
June 27, 2013

On June 26, 2013, the Indiana State Department of Health announced the detection of four human cases of H3N2v who had recent direct and indirect exposure to swine at a local fair. Sporadic infections and even localized outbreaks among people with this virus may continue to occur. This guidance updates Michigan Department of Community Health (MDCH) 2012 recommendations on variant H3N2 (H3N2v) influenza surveillance, reporting and testing for healthcare providers, laboratories, and local health departments. ***Michigan healthcare providers should be vigilant for suspect human cases.***

Influenza Case Identification, Testing, and Treatment

1. ***Clinicians treating patients with an influenza-like illness (fever ≥100°F plus a cough and/or a sore throat) should ask about recent exposure to swine or attendance at county or state fairs.*** Clinical characteristics of an H3N2v infection are similar to symptoms of uncomplicated seasonal influenza, including fever, cough, pharyngitis, rhinorrhea, myalgia, and headache. Vomiting and diarrhea have also been reported in some pediatric cases. Milder illness is possible, including lack of fever. Duration of illness in most cases is approximately 3-5 days.

2. ***Collection of upper respiratory specimens is strongly advised for any influenza-like illness (e.g., outpatients, hospitalizations, deaths) among the following***:

- Patients reporting direct or indirect swine exposure or attendance at a county fair
- Patients reporting close contact (within 6 ft) to an ill person with recent swine exposure
- Children <18 years of age
- Unusual or severe presentations of influenza-like illness, including hospitalizations
- Outbreaks of influenza-like illness, especially among children

3. ***Respiratory specimens should be collected as soon as possible after illness onset***. Preferred respiratory specimens include: nasopharyngeal swab, nasal aspirate or wash or a combined nasopharyngeal swab with oropharyngeal swab. Nasal or oropharyngeal swabs are also acceptable but less preferred. For intubated patients, also collect an endotracheal aspirate. Bronchoalveolar lavage (BAL) and sputum specimens are also acceptable.

- Specimens should be placed into sterile viral transport media and immediately placed on refrigerant gel-packs or at 4°C (refrigerator) for transport to the laboratory.

4. ***Specimens from suspect H3N2v cases should be submitted to MDCH for confirmation***

- Commercially available rapid influenza diagnostic tests (RIDTs) **may not** detect H3N2v virus in respiratory specimens. In addition, a positive test result for influenza A cannot confirm H3N2v virus infection because these tests cannot distinguish between influenza A virus subtypes (does not differentiate between human influenza A viruses and H3N2v virus).
- PCR testing available at private, clinical and hospital labs will most likely detect the presence of influenza A virus infection, but may not differentiate an H3N2v infection.
- For information on how to collect and submit specimens to the MDCH Bureau of Laboratories, including the required Test Requisition form, refer to: http://www.michigan.gov/mdch/0,4612,7-132-2945_5103-213906--,00.html

5. The antiviral drugs oseltamivir (Tamiflu) and zanamivir (Relenza) are effective in treating H3N2v virus infection

Early initiation of antiviral treatment is most effective. Further information for clinicians regarding the treatment of H3N2v influenza is available at: http://www.cdc.gov/flu/swineflu/h3n2v-clinician.htm.

6. ***Infection Control***

Healthcare personnel who treat ill persons with suspected H3N2v infections should follow standard, contact, and droplet precautions as recommended for patient care.

How to Report Suspect H3N2v Influenza Cases

Clinicians and Laboratorians:

Contact your local health department immediately to report suspect cases and to arrange for testing (or contact MDCH at (517) 335-8165 or after hours at (517) 335-9030)

Local Health Departments:

- Please report any confirmed, probable, or suspect H3N2v case to MDCH at (517) 335-8165 and enter the case into MDSS using the "Novel Influenza" form. Complete the Case Details form.
- MDCH will work with local health departments to complete CDC forms if cases are identified.
- Case definitions are available online at http://www.cdc.gov/flu/swineflu/case-definitions.htm

Healthcare and public health providers should continue to report other influenza cases (seasonal, suspect novel influenza cases, pediatric deaths, facility outbreaks) as previously directed; guidance is available at www.michigan.gov/mdch/0,1607,7-132-2945_5104_53072_53073---,00.html#I.

Background on H3N2v Human Cases

- In 2011, a new swine influenza A (H3N2v) virus was detected that had acquired the M gene from the influenza A(H1N1)pdm09 (2009 H1N1) virus. It is possible that the 2009 H1N1 virus M gene may make H3N2 viruses in swine more transmissible to humans and possibly among humans. When human infections with these viruses occur, these viruses are called "variant" viruses (which can also be denoted with the letter "v").
- In 2012, 6 Michigan H3N2v influenza cases and over 300 cases nationwide were identified and associated with exposure to swine and agricultural fairs.
- Limited human-to-human transmission of this virus occurred. No sustained (ongoing) community transmission of H3N2v virus has been observed to date.
- Most cases of H3N2v have occurred in children who may lack immunity to the H3N2v virus.
- H3N2v influenza has been confirmed June 26, 2013, in both humans and swine in Indiana.
- Clinical symptoms are consistent with seasonal flu symptoms. As with seasonal flu, those at higher risk for flu-related complications may develop more serious illness.
- CDC recommends annual seasonal influenza vaccination for all persons aged 6 months and older to protect against seasonal influenza viruses; however, seasonal influenza vaccine is unlikely to protect against variant influenza viruses, including H3N2v viruses.
- Influenza variant viruses have not been shown to be transmissible to people through eating or proper handling of pork (pig meat) or other products derived from pigs.
- The most current national information, including case counts, can be found on the CDC's website http://www.cdc.gov/flu/swineflu/h3n2v-cases.htm.

Please contact the MDCH Division of Communicable Disease at (517) 335-8165 with any questions.